REMARKS

Claims 1 -11, 13 and 15 -19 are currently pending in the application. Original claims 1 -15 were rejected under 35 U.S.C. § 102/103. Claims 12 and 14 have been cancelled. Claims 1-11, 13 and 15 have been amended. New claims 16 -19 have been added.

Amendments

Applicants have amended claims 1-9 to recite a method for producing a transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline. Claims 1, 4 and 7 have been further amended to recite that the transportation fuels produced by the method have an octane rating of about 87 to about 94. Finally, claims 1 and 4 have been amended to recite that the transportation fuels produced by the method have an olefins content of at least 15%. These amendments are supported *inter alia* at page 1, 2 and 4 of the specification. No new matter has been added.

Applicants have amended claims 10, 11, 13 and 15 to recite a method for producing an oxygenated transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the EPA Complex Model. These amendments are supported *inter alia* at pages 1 and 7 of the specification. No new matter has been added. Claim 10 has been further amended to correct a typographical error at line (d). The term "greater than" has been corrected to recite "less than." The temperature range of less than 360° F is correctly stated at page 7 of the specification. No new matter has been added.

Applicants have added new claims 16 -19, which recite an oxygenated transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the

EPA Complex Model. These new claims are supported *inter alia* at page 7 of the specification. No new matter has been added.

Applicants have cancelled claims 12 and 14.

I. Rejections Under 35 U.S.C. § 102

Claims 1 to 6 were rejected under 35 U.S.C. § 102(e) as being anticipated by one or both of U.S. Patent 6,383,236 (Welstand) or U.S. Patent 6,209,734 (Scott). Claims 1, 2, 4, 5, 7 and 8 were rejected under 35 U.S.C. § 102(b) as being anticipated by CRC Report No. 477. Applicants have amended claims 1 -8.

M.P.E.P. § 2131 states that, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Welstand

Claims 1, 2, 4 and 5 were rejected as being anticipated by Welstand. Welstand discloses a non-oxygenated fuel having low emissions of pollutants, particularly NO_x gas. The compositions of Welstand are compared versus the requirements of the California Predictive Model developed by CARB. According to Welstand, by controlling the sulfur content of gasoline fuels to less than 30 ppmw, and particularly by controlling sulfur to less than 30 ppmw in conjunction with an olefins content of less than 8 volume percent, greater flexibility is provided with respect to other variables in the California Predictive Model. Specifically, with a sulfur content of less than 30 ppmw Welstand teaches that it is possible to exceed the cap limits for T-50 and/or T-90 set by the California Predictive Model for Phase 2 reformulated gasoline.

The disclosure of Welstand states that it is preferred to have an olefin content of less than 8 volume percent to achieve greater flexibility with respect to T-50 and T-90, but does

not state that it is required. However, the California Predictive Model indicates a cap limit of 10 volume percent for olefins. Although, Welstand apparently contemplates exceeding 8 volume percent olefins in the non-oxygenated fuels it discloses in non-preferred embodiments, it is silent with respect to the cap limit of 10 volume percent. In contrast, Welstand states explicitly that the cap limits of 220° F and 330° F for T-50 and T-90 are exceeded in the fuels it discloses. Welstand, col. 3, lns. 5 -11.

Applicants respectfully submit that based on the above, Welstand does not contemplate fuels with an olefin content of greater than 10 volume percent. In fact, Welstand teaches lower olefins content. Therefore, Applicants respectfully submit that the disclosure of Welstand would indicate to one of ordinary skill in the art that it is not possible to obtain a non-oxygenated fuel with low pollutant emissions at olefins contents greater than 10 volume percent.

Both independent claims 1 and 4 have been amended to recite a method for producing a transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the EPA Complex Model. The method comprises blending a plurality of hydrocarbon streams to produce a transportation fuel having particular properties for sulfur content, octane rating, 50% D-86 distillation point, 90% D-86 distillation point, olefins content and Reid Vapor Pressure. Both claims 1 and 4 as amended recite that the olefins content of the blend produced is greater than 15 percent. As indicated in the specification of the instant application, the Applicants have discovered that reducing the sulfur content of an oxygenated or non-oxygenated fuel allows much higher olefins contents than would be expected, while still complying with the emissions performance requirements of the Clean Air Act Amendments.

Applicants respectfully submit that because Welstand does not teach olefins contents greater than 10 volume percent, Welstand doe not teach each element of claims 1 or 4. Therefore, Applicants respectfully submit that Welstand cannot anticipate either of claims 1 or 4. Additionally, since claims 2 and 5 depend from claims 1 and 4 respectively, Applicants respectfully submit that those claims cannot be anticipated by Welstand. Reconsideration is respectfully requested.

Scott

Claims 1 -6 were rejected as being anticipated Scott. Scott discloses a method of blending an unleaded summer gasoline. The method comprises providing a substantially oxygenate free unleaded gasoline blend stock and adding sufficient ethanol thereto such that the T-50 of the blend does not drop below 170° F. Scott states explicitly at column 7, lines 52 to 53 that the olefins content of the fuels it discloses is less than 8 volume percent. Therefore, as with Welstand, Scott does not contemplate fuels compositions having an olefins content of greater than 15 percent. Applicants therefore respectfully submit that for the same reasons stated with respect to Welstand, independent claims 1 and 4 cannot be anticipated by Scott. Applicants further respectfully submit that because claims 2 and 3, and 5 and 6 depend from claims 1 and 4 respectively, these claims also cannot be anticipated by Scott. Reconsideration is respectfully requested.

CRC Report No. 477

Claims 1, 2, 4, 5, 7 and 8 were rejected as being anticipated by CRC Report No. 477. The CRC Report contains a table listing a number of test fuels used to test the relationship between laboratory properties of the fuels and road octane performance. Applicants have included a full copy of CRC Report No. 477 for Examiner's convenience. The summary located on page 1 indicates the purpose of the study and test fuels.

Independent claims 1, 4 and 7 have been amended to recite a method for producing a transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the EPA Complex Model. The method of claims 1 and 4 was discussed above. The method of claim 7 is similar to claims 1 and 4, but recites different properties for the 50% D-86 and 90% D-86 distillation points.

Claim 1 recites a method wherein a plurality of hydrocarbon streams is blended to produce a transportation fuel having a 50% D-86 distillation point of greater than 215° F and an olefins content of greater than 15 percent, in addition to other properties.

In contrast, none of the fuel compositions disclosed by CRC Report No. 477 have a combination of a 50% D-86 distillation point greater than 215° F and an olefins content of greater than 15 percent.

Applicants therefore respectfully submit that because CRC Report No. 477 does not disclose a composition having each element of claim 1, that claim cannot be anticipated by CRC Report No. 477. Further, since claim 2 depends from claim 1, Applicants respectfully submit that claim 2 cannot be anticipated. Reconsideration is respectfully requested.

Claim 4 recites a method wherein a plurality of hydrocarbon streams is blended to produce a transportation fuel having a 90% D-86 distillation point of greater than 325° F and an olefins content of greater than 15%, in addition to other properties.

In contrast, none of the fuel compositions disclosed by CRC Report No. 477 have a combination of a 90% D-86 distillation point greater than 325° F and an olefins content of greater than 15 percent.

Applicants therefore respectfully submit that because CRC Report No. 477 does not disclose a composition having each element of claim 4, that claim cannot be anticipated by

CRC Report No. 477. Further, since claim 5 depends from claim 4, Applicants respectfully submit that claim 5 cannot be anticipated. Reconsideration is respectfully requested.

Further, as indicated above, CRC Report No. 477 discloses test fuels used to test the relationship between laboratory properties of the fuels and road octane performance. CRC Report No. 477 does not teach a method of blending hydrocarbon streams to obtain a transportation fuel having specific properties and also meeting emissions performance requirements. CRC Report No. 477 does not concern itself with emissions of pollutants at all.

Claims 1, 4 and 7 each recite a method for producing a transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the EPA Complex Model. The method comprises blending a plurality of hydrocarbon streams to produce a transportation fuel having particular properties for sulfur content, octane rating, 50% D-86 distillation point, 90% D-86 distillation point, olefins content and Reid Vapor Pressure.

Therefore Applicants respectfully submit that claims 1, 4 and 7 cannot be anticipated by CRC Report No. 477. Further, because claims 2, 5 and 8 depend from claims 1, 4 and 7 respectively, Applicants respectfully submit that these claims cannot be anticipated by CRC Report No. 477. Reconsideration is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 7, 8, 10-12 and 14 were rejected under 35 U.S.C. § 103(a) as being obvious over Welstand. Claims 3, 6, 9, 13 and 15 were rejected under 35 U.S.C. § 103(a) as being obvious over Welstand in view of U.S. Statutory Invention Registration H1305 (Townsend). Applicants have amended claims 3, 6-11, 13 and 15. Applicants have cancelled claims 12 and 14.

M.P.E.P. § 2143 states that in order to establish a prima facie case of obviousness three basic criteria must be met. First there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach all of the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

Welstand: claims 7, 8, 10 and 11

With respect to claims 7 and 8, Examiner admits that Welstand does not disclose all of the properties of the composition recited in claim 7. However, Examiner asserts that it would have been obvious for one of ordinary skill in the art to modify Welstand to obtain the compositions recited in claim 7.

As indicated above, claims 7 and 8 have been amended to recite methods for producing a transportation fuel complying with the emissions performance requirements of the Clean Air Act Amendments for Conventional Gasoline and for Reformulated Gasoline as predicted by the EPA Complex Model. The method comprises blending a plurality of hydrocarbon streams to produce a transportation fuel having particular properties for sulfur content, octane rating, 50% D-86 distillation point, 90% D-86 distillation point, olefins content and Reid Vapor Pressure.

As a threshold matter, Welstand does not teach or suggest an olefin content of greater than 15 percent as recited in claim 7. In fact, as stated above Applicants respectfully submit that Welstand does not contemplate an olefin content exceeding the California Predictive Model cap limit of 10 volume percent. Coupled with the express teaching that lower olefin

contents are preferred, Applicants respectfully submit that Welstand actually teaches away from higher olefins contents.

Examiner has admitted that Welstand does not disclose all of the features recited in claim 7. Based on the above, Applicants respectfully submit that there is no motivation in Welstand to modify its teachings to produce a fuel with an olefins content greater than 15 percent. No motivation to do so in the art generally has been presented by Examiner. Even if motivation could be found in the art in general, that teaching would conflict with the teaching of Welstand that lower olefins contents are preferable. Applicants therefore respectfully submit that claim 7 cannot be obvious over Welstand. Further, because claim 8 depends from claim 7, Applicants respectfully submit that this claim cannot be obvious over Welstand. Reconsideration is respectfully requested.

With respect to claims 10 and 11, Applicants have amended claim 10 to recite a method for producing an oxygenated fuel. The method comprises providing a blend stock suitable for blending with an oxygenate, the blend stock having particular properties, particularly an olefin content greater than 15 percent. The blend stock is then blended with an oxygenate to produce a transportation fuel having an octane rating of at least 87.

As indicated above, Welstand does not teach or suggest fuels having an olefins content of greater than 15 percent.

Applicants therefore respectfully submit that for the same reasons stated with respect to claim 7, claim 10 cannot be obvious over Welstand. Further, because claim 11 depends from claim 10, Applicants respectfully submit that this claim cannot be obvious over Welstand. Reconsideration is respectfully requested.

Welstand and Townsend: claims 3, 6, 9, 13 and 15

With respect to claims 3, 6, 9, 13 and 15 Examiner asserts that it would have been obvious for one having ordinary skill in the art to add an oxygenate as disclosed in Townsend to the compositions of Welstand to arrive at the compositions of the instant claims.

Claims 3, 6, 9, 13 and 15 have been amended to recite a method for producing a transportation fuel as indicated above. Claims 3, 6 and 9 depend from claims 1, 4 and 7 respectively and as a result encompass all of the features of those claims. Further, as stated above, Welstand does not disclose a method for producing a transportation fuel wherein the transportation fuel has an olefin content of greater than 15 percent. Therefore, Welstand does not teach or suggest all of the features of claims 3, 6 or 9. Townsend does not cure the fundamental deficiency of Welstand. Townsend discloses a method for reducing pollutant emissions from a reformulated gasoline by reducing the olefin content of said gasoline. In Table 1, Townsend discloses an industry average gasoline having an olefin content of 9.7 percent. The test blends presented according to the invention of Townsend have olefin contents of approximately 5 percent.

Neither of Welstand or Townsend teach or suggest a method of producing a transportation fuel having an olefin content of greater than 15 percent. In fact, both references teach that reductions in olefin content are favored to reduce emissions. Applicants therefore respectfully submit that Welstand and Townsend cannot be combined to arrive at the invention recited in any of claims 3, 6 or 9. Further, Applicants respectfully submit that there is no motivation to modify either of Welstand or Townsend as Examiner suggests in those references. Applicants therefore respectfully submit that none of claims 3, 6 or 9 can be obvious over either of Welstand or Townsend, either alone or in combination. Reconsideration is respectfully requested.

Claims 13 and 15 depend from claim 10 and as a result encompass all of the features of that claim. As shown above, Welstand does not teach or suggest all of the features of claim 10. As further shown above, Townsend does not cure the fundamental deficiency of Welstand. Applicants therefore respectfully submit that for the same reasons as indicated above, claims 13 and 15 cannot be obvious over either of Welstand or Townsend, either alone or in combination. Reconsideration is respectfully requested.

New Claims 16-19

Applicants have presented new claims 16-19, which recite an oxygenated transportation fuel complying with the emissions requirements of the Clean Air Act Amendments for Conventional Gasoline and Reformulated Gasoline as predicted by the EPA Complex Model.

Claim 16 recites that the oxygenated transportation fuel comprises a blend of hydrocarbon streams having a sulfur content of less than 300 ppm, an octane rating of about 87 to about 94, a 50% D-86 distillation point of less than 235° F, a 90% D-86 distillation point of less than 360° F, an olefins content of greater than 15 percent, and a Reid Vapor Pressure of less than 7.5; and at least one oxygenate.

CONCLUSION

Applicants believe that the foregoing amendments and remarks have overcome or rendered moot all grounds for rejection or objection. There being no other rejections or objections, Applicants believe that the application is in a condition for allowance. Applicants therefore respectfully request prompt action on the claims and allowance of the application. If the Examiner believes that personal communication will expedite prosecution of the application, the Examiner is invited to telephone Applicants' undersigned agent directly.

AUTHORIZATION

Applicants believe that a one month extension of time is required to make submission of this response timely and hereby submit a petition for such extension. However, in the event that an extension of time beyond that requested is required, Applicants hereby submit a petition for such extension of time as may be necessary to make this response timely. The Commissioner is hereby authorized to charge the necessary fees to deposit account No. 502194. A duplicate of this authorization is enclosed.

Respectfully Submitted,

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